PATENT SPECIFICATION (11) 1 305 023

1 305 023

DRAWINGS ATTACHED (19)

(21) Application No. 28077/69 (22) Filed 3 June 1969

(23) Complete Specification filed 2 June 1970

(44) Complete Specification published 31 Jan. 1973

(51) International Classification B05C 5/02 A24C 5/50

(52) Index at acceptance
D1L 23X
A2C 1E2

(72) Inventor ROLF PENZIAS

(54) ADHESIVE-APPLYING DEVICES

(71) We, MOLINS MACHINE COMPANY LIMITED, a British Company, of 2 Evelyn Street, Deptford, London, S.E.8., do hereby declare the invention for which we pray that a patent may be granted to us and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to adhesive-applying devices for applying adhesive to continuous wrapper webs in the manufacture of continuous wrapped rods.

According to the invention there is provided an adhesive-applying device for applying adhesive to a moving web, comprising support means against which in use the back of the web bears, and a nozzle opposed to the support means and having an elongated head engageable with the front of the web to apply adhesive thereto, the major axis of the elongated head being oriented parallel to the width of the web, and the head having one or more adhesive outlets located therein and a step cut away at the trailing edge of the head parallel to the major axis.

An embodiment of the invention will now be described, by way of example only, with reference to the accompanying drawings in which:

Figure 1 is a fragmentary side elevational view of part of a continuous filter rod making machine;

Figure 2 is a fragmentary perspective view of part of the wrapper web shown in Figure 1;

Figure 3 is a perspective view of a nozzle used in the machine shown in Figure 1; and

Figure 4 is a fragmentary sectional view, on an enlarged scale, of part of the nozzle shown in Figure 3.

A continuous filter rod making machine has a garniture 1 into which a web of wrapping paper 2 is carried on a garniture tape 3. Filter material 6, in the form of tow or web, is fed through a funnel 4 and tongue 5, in series with one another, into the garniture 1.

The construction of a garniture of this type is well known and it operates to fold and seal the wrapper 2 around the filter material 6 to form a continuous rod of circular cross-section which is subsequently cut up to provide filter plugs for filter tipped cigarettes.

Adhesive, in this case polyvinyl acetate, is applied in a first line 7 along one edge of the paper wrapper 2 by a first gun 8. This first line of adhesive 7 is for securing the two edges of the wrapper 2 together to form a tube around the filter material 6.

A second gun 9, downstream of the first gun 8, is adapted to deposit three further, mutually parallel, lines of adhesive on the same side of the paper web 2 as the first line of adhesive 7. These further lines of adhesive 10, 11 and 12 respectively serve to hold the filter material 6 with respect to the paper wrapper 2 in order to prevent axial displacement.

Both guns 8 and 9 are supplied with the polyvinyl acetate adhesive in liquid form from a reservoir (not shown) by means of a peristaltic pump (not shown) in a manner similar to that described with reference to and as disclosed in Figure 4 of the complete specification the use of a peristaltic pump tion No. 1,238,845. As explained in that specification the use of the peristaltic pump has the advantage that the pump itself is not in contact with the adhesive and therefore cannot become jammed or fouled thereby.

The gun 9 is fitted with a nozzle 13, shown in Figures 3 and 4, which co-acts with a bridge arrangement 15 to tension the paper web 2 while the adhesive is being applied in the form of the lines 10 to 12. This bridge arrangement is described and shown in more detail with reference to Figure 1A of the above-mentioned specification.

The nozzle 13 has three adhesive outlets 14 formed in a bearing surface 16 which bears against the paper web 2 as the latter passes between the nozzle 13 and the bridge 15. A notch or step 17 is formed in the nozzle 13 immediately downstream of the adhesive outlets 14.

The notch or step 17 is designed to pro-

mote the distinct formation of the three lines of adhesive 10, 11 and 12 and to inhibit the deposition of excess adhesive on the paper wrapper 2 during the formation of these three lines.

Although this particular design of nozzle has been shown in relation to a machine in which adhesive is applied before the wrapper enters the garniture, it can also be used in the more conventional kind of machine in which the adhesive is applied after the wrapper has entered the garniture and is in fact already partially surrounding the filler.

Although the nozzle 13 has been shown as having three outlets 14 it can have a single outlet, or any other appropriate number of outlets.

WHAT WE CLAIM IS:—

1. An adhesive-applying device for applying adhesive to a moving web, comprising support means against which in use the back of the web bears, and a nozzle opposed to the support means and having an elongated head engageable with the front of the web to apply adhesive thereto, the major axis of the elongated head being oriented parallel to the width of the web, and the head having one or more adhesive outlets located therein and a step cut away at the trailing edge of the head parallel to the major axis.

2. An adhesive-applying device as claimed in claim 1 wherein the support means comprises a bridge member adjustable relative to the nozzle and having two hump portions to support a length of web against which the head of the nozzle is engageable.

3. An adhesive-applying device as claimed in claim 1, substantially as described herein with reference to, and as shown in, Figures 1, 3 and 4 of the accompanying drawings.

W. A. POWLEY,
Chartered Patent Agent,
2 Evelyn Street,
Deptford, London, S.E.8,
Agent for the Applicants.

(9818) Printed in Scotland by Her Majesty's Stationery Office
at HMSO Press, Edinburgh, 1972.
Published by The Patent Office, 25 Southampton Buildings, London, WC2A 1AY,
from which copies may be obtained.

1305023 COMPLETE SPECIFICATION
2 SHEETS *This drawing is a reproduction of the Original on a reduced scale*
Sheet 1

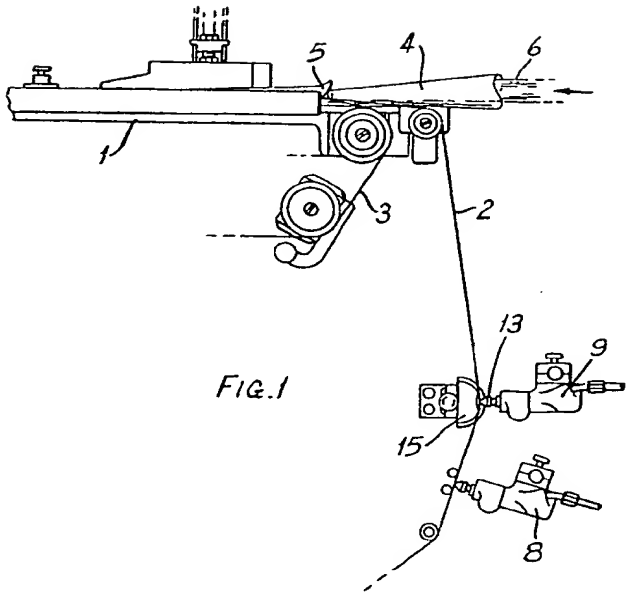

FIG. 1

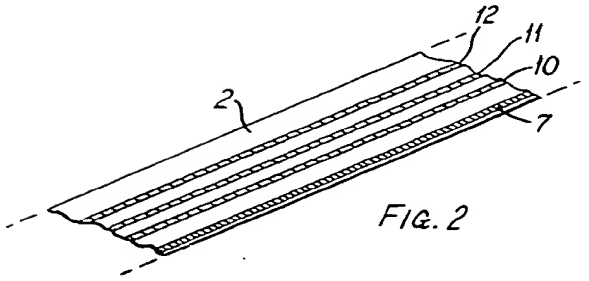

FIG. 2

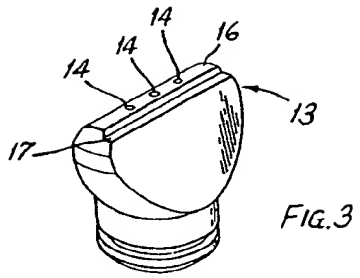

FIG.3

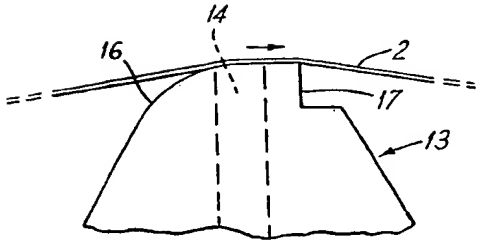

FIG.4